## **ELECTRONIC INFORMATION DISCLOSURE STATEMENT**

Electronic Version v18

Stylesheet Version v18.0

Title of Invention

Inhibition of SHIP to Enhance Stem Cell Harvest and Transplantation

**Application Number:** 

10/709801

Confirmation Number:

2999

First Named Applicant:

Caroline Desponts

Attorney Docket Number:

1372.160.PRC

Art Unit:

Examiner:

Search string:

(6025198 or 6703215 or 20040072298).pn

## **US Patent Documents:**

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
$\mathcal{R}$	. 1	6025198	2000-02-15	Bennett et al.			
7	2	6703215	2004-03-09	Erneux et al.			

## **US Published Applications**

Note: Applicant is not required to submit a paper copy of cited US Published Applications

init Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
$\frac{1}{2}$	20040072298	2004-04-15	Sauvageau et al.			

## Signature

2 -11/- 07	Date	Examiner Name
3-19-61	3-14-07	(1)

PTO/SB/08B (08-03)
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Substitute for form 1449/PTO			Complete if Known			
Subsu	tute for form 1449/PTO			Application Number	10/709,801	
INF	ORMATION	DIS	CLOSURE	Filing Date	05/28/2004	
STATEMENT BY APPLICANT				First Named Inventor	Caroline Desponts	
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	(Use as many sne	eers as r	lecessary)	Examiner Name	Unassigned	
Sheet	1	of	1	Attorney Docket Number	1372.160.PRC	
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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
73	_1	HELGASON, CHERYL D. ET AL., Homeostasis and Regeneration of the Hematopoietic Stem Cell Pool are Altered in SHIP-Deficient Mice, Blood, 2003, 6541-3547,102(10).	
	2	MOODY, JENNIFER L. ET AL., Anemia, Thrombocytopenia, Leukocytosis, Extramedullary Hematopoiesis, and Impaired Progenitor Function in Pten+/-SHIP-/- Mice:, Blood,2004,4503-4510	
	3	TU, ZHENG ET AL., Embryonic and Hematopoietic Stem Cells Express a Novel SH2-Containing Inositol 5'-Phosphatase Isoform, Blood, 2001, 2028-2038, 98(7).	

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Substitute for fo	m 1449A/PTQ			Complete if Known			
INFORM	ATION DISC		DE	Application Number	10/709,801		
	ATION DISC ENT BY API			Filing Date	May 28, 2004		
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Sheet	1	of	3	Attorney Docket Number	USF-212XZ1T		

			U.S. PATENT D	OCUMENTS	
Examiner Initials*	Cite No. 1	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
93	U1	US-6,506,559 B1	01-14-2003	Fire et al.	All
170	U2	US-5,804,412	09-08-1998	Gill et al.	All
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Examiner Initials*	Cite No. 1	Country Code 3 - Number 4 - Kind Code5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>				
43	F1	WO 99/32619 A1	07-01-1999	Carnegie Inst. of Wash.	All					
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Application Number	10/709,801
Filing Date	May 28, 2004
First Named Inventor	Caroline Desponts
Group Art Unit	1632 / 6 3
Examiner Name	
Attorney Docket Number	USF-212XZ1T

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93	R1	AGRAWAL, N. et al. "RNA interference: biology, mechanism, and applications" Microbiol. Mol. Biol. Rev., 2003, 67:657-685.					
	R2	BONETTA, L. "RNAi: Silencing never sounded better" Nature Methods, 2004, 1(1):79-86.					
	R3	CAPLEN, N.J. "RNAi as a gene therapy approach" Expert Opin. Biol. Ther., 2003, 3:575-586.					
	R4	CAPLEN, N.J. et al. "Specific inhibition of gene expression by small double-stranded RNAs in invertebrate and vertebrate systems" PNAS, 2001, 98(17):9742-9747.					
	R5	DAMEN, J.E. et al. "The 145-kDa protein induced to associate with Shc by multiple cytokines is an inositol tetraphosphate and phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase" <i>Proc. Netl. Acad. Sci. USA</i> , 1996, 93:1689-1693.					
	R6	ELBASHIR, S. et al. "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells" Nature, 2001, 411:494-498.					
	R7	ELBASHIR, S. et el. "RNA interference is mediated by 21- and 22-nucleotide RNAs" Genes & Development, 2001, 15:188-200.					
	R8	FIRE, A. et al. "Potent and specific genetic interference by double-stranded RNA in Caenorhabditis elegans" Nature, 1998, 391:806-811.					
	R9	HARBORTH, J. et al. "Identification of essential genes in cultured mammalian cells using small interfering RNAs" J. Cell Sci., Dec. 2001, 114(Pt. 24):4557-4565.					
	R10	LIU, Q. et al. "Molecular cloning and chromosomal localization in human and mouse of the SH2-containing inositol phosphatase, INPP5D (SHIP)" Genomics, 1997, 39:109-112.					
	R11	MONTGOMERY, M.K. et al. "RNA as a target of double-stranded RNA-mediated genetic interference in Caenorhabditis elegans" Proc. Natl. Acad. Sci. USA, 1998, 95:15502-15507.					
	R12	SVOBODA, P. et al. "Selective reduction of dormant maternal mRNAs in mouse oocytes by RNA interference" Development, 2000, 127:4147-4156.					
A	R13	TUSCHL, T. et al. "RNA interference and small interfering RNAs" Chembiochem, 2001, 2(4):239-245.					

Examiner Signature Date Considered 3 / 4/07						
Signature   Considered   3   14/07	Examiner	2	-	Date	/	. 7
	Signature			Considered	31	14107

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31 <i>P</i>	TEMENT BY	APF	LICANI	First Named Inventor	Caroline Desponts	
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Sheet	3	of	3	Attorney Docket Number	USF-212XZ1T	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
93	R14	TUSCHL, T. et al. "Targeted mRNA degradation by double-stranded RNA in vitro" Genes & Development, 1999, 13:3191-3197.	
0.0	R15	WARE, M.D. et al. "Cloning and characterization of human SHIP, the 145-kD inositol 5-phosphatase that associates with SHC after cytokine stimulation" <i>Blood</i> , 1996, 88:2833-2840.	
$\bigvee$	R16	ZAMORE, P. et al. "RNA: double-stranded RNA directs the ATP-dependent cleavage of mRNA at 21 to 23 nucleotide intervals" Cell, 2000, 101:25-33.	
93	~ R17	Office Action mailed 12/29/2005 in U.S. Serial No. 09/955,174, filed September 19, 2001.	
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Application Number	10/709,801				
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73	R1	HANNON, G.J. and ROSSI, J.J. "Unlocking the potential of the human genome with RNA interference" <i>Nature</i> , 2004, 431:371-378.	
	R2	HEMANN, M.T. et al. "An epi-allelic series of p53 hypomorphs created by stable RNAi produces distinct tumor phenotypes in vivo" Nature Genetics, 2003, 33:396-400.	
	R3	OPALINSKA, J.B. and GEWIRTZ, A.M. "Nucleic-acid therapeutics: Basic principles and recent applications" Nature Reviews, 2002, 1:503-514.	
	R4	PERA, M.F. et al. "Human embryonic stem cells" J. Cell Sci., 2000, 113:5-10.	
-	R5	PUENTE, X.S. et al. "Human and mouse proteases: A comparative genomic approach" Nature Reviews, 2003, 4:544-558.	
	R6	RAUH, M.J. et al. "The role of SHIP1 in macrophage programming and activation" Biochem. Soc. Trans., 2004, 32:785-788.	
	R7	REHLI, M. et al. "The membrane-bound ectopeptidase CPM as a marker of macrophage maturation in vitro and in vivo" Adv. Exp. Med. Biol., 2000, 477:205-216.	
	R8	ROHRSCHNEIDER, L.R. et al. "Structure, function, and biology of SHIP proteins" Genes & Develop., 2000, 14:505-520.	
	R9	VERFAILLIE, C.M. "Hematopoietic stem cells for transplantation" Nature Immunology, 2002, 3:314-317.	
	R10	ZANDSTRA, P.W. et al. "Leukemia inhibitory factor (LIF) concentration modulates embryonic stem cell self-renewal and differentiation independently of proliferation" <i>Biotechnol. Bioeng.</i> , 2000, 69:607-617.	
	R11	Examination Report dated November 11, 2006, issued in related European application number 01973144.7.	
	R12	GHANSAH, T. et al. "Expansion of myeloid suppressor cells in SHIP-deficient mice represses allogeneic T cell responses" J. Immunology, 2004, 173:7324-7330.	
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